

Patent Claims

1. Electronic component, particularly a surface-mountable radiation-emitting and/or radiation-sensitive electro-optical component (1), with a plastic housing (10) that includes at least one metallic soldering area (4), characterized in that the surface of the plastic housing (10), except for the metallic soldering area (4), is at least partially covered by an anti-solder coating (6).
2. Electronic component as in Claim 1, characterized in that the anti-solder coating (6) essentially consists of siloxane.
3. Electronic component as in Claim 1 or 2, characterized in that the anti-solder coating (6) essentially consists of polysiloxane.
4. Electronic component as in one of the previous Claims, characterized in that the anti-solder coating (6) is essentially based on methyl-polysiloxane.
5. Electronic component as in one of the previous Claims, characterized in that the anti-solder coating (6) is essentially based on dimethyl-polysiloxane.
6. Electronic component as in one of the previous Claims, characterized in that the anti-solder coating (6) is essentially based on polyether-modified dimethyl-polysiloxane.
7. Electronic component as in one of the previous Claims, characterized in that the plastic housing (14) contains a radiation-emitting and/or radiation-detecting semi-conductor element that is embedded in transparent plastic for the emitted and/or received radiation.
8. Process [for] production of an electronic component, particularly a surface-mountable radiation-emitting and/or radiation-sensitive electro-optical component (1) with a plastic housing (14) that includes at least one metallic soldering area (4), characterized in that only the plastic housing, or a portion of the plastic housing, is covered with an anti-solder coating (6) that essentially consists of siloxane, and that is applied to the plastic housing (14) in a hydrous solution not containing any other additional solvents.
9. Process according to Claim 8, characterized in that a 0.01 – 5% hydrous solution of the material forming the anti-solder coating (6) is used.

10. Process according to Claim 9, characterized in that a 0.01 – 2.5% hydrous solution of the material forming the anti-solder coating (6) is used to create as non-adhesive an anti-solder coating as possible.

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11. Process according to Claim 8, 9, or 10, characterized in that the entire surface of the housing (14) including the soldering areas (4) is covered by the hydrous solution, particularly by immersion, spraying, dripping, and/or by means of a sponge or similar.

12. Process according to Claim 10, characterized in that the exposure time for the coating is between approximately 1 second and approximately 30 seconds.

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13. Process according to one of Claims 8 through 11, characterized in that the hydrous solution is applied at room temperature, and that subsequent drying occurs in air without a thermal post-processing step.

14. Process according to one of Claims 8 through 12, characterized in that the hydrous solution is used with a phosphate buffer medium at a concentration of from 0.01 mmol/liter to 0.1 mmol/liter.

15. Process according to one of Claims 8 through 13, characterized in that the hydrous solution includes a fungicide.

16. Coating medium used to reduce solder splash on surfaces (5) not intended for solder on an electronic component with several surfaces, especially a surface-mountable radiation-emitting and/or radiation-sensitive electro-optical component (1), with a plastic housing (14) that includes at least one metallic soldering area (4), whereby the coating medium (9) is essentially a siloxane.

17. Coating medium according to Claim 15, whereby the coating medium (9) is a siloxane.

18. Coating medium according to Claim 16, whereby the coating medium (9) is a methyl-polysiloxane.

19. Coating medium according to Claim 17, whereby the coating medium (9) is a dimethyl-polysiloxane.

10. Process according to Claim 9, characterized in that a 0.01 – 2.5% hydrous solution of the material forming the anti-solder coating (6) is used to create as non-adhesive an anti-solder coating as possible.
11. Process according to Claim 8, 9, or 10, characterized in that the entire surface of the housing (14) including the soldering areas (4) is covered by the hydrous solution, particularly by immersion, spraying, dripping, and/or by means of a sponge or similar.
12. Process according to Claim 10, characterized in that the exposure time for the coating is between approximately 1 second and approximately 30 seconds.
13. Process according to one of Claims 8 through 11, characterized in that the hydrous solution is applied at room temperature, and that subsequent drying occurs in air without a thermal post-processing step.
14. Process according to one of Claims 8 through 12, characterized in that the hydrous solution is used with a phosphate buffer medium at a concentration of from 0.01 mmol/liter to 0.1 mmol/liter.
15. Process according to one of Claims 8 through 13, characterized in that the hydrous solution includes a fungicide.
16. Coating medium used to reduce solder splash on surfaces (5) not intended for solder on an electronic component with several surfaces, especially a surface-mountable radiation-emitting and/or radiation-sensitive electro-optical component (1), with a plastic housing (14) that includes at least one metallic soldering area (4), whereby the coating medium (9) is essentially a siloxane.
17. Coating medium according to Claim 15, whereby the coating medium (9) is a siloxane.
18. Coating medium according to Claim 16, whereby the coating medium (9) is a methyl-polysiloxane.
19. Coating medium according to Claim 17, whereby the coating medium (9) is a dimethyl-polysiloxane.

20. Coating medium according to Claim 18, whereby the coating medium (9) is a polyether-modified dimethyl-polysiloxane.

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21. Coating medium according to one of Claims 12 through 19, whereby the coating medium (9) is dissolved in a 0.01 – 5% hydrous solution without other solvents for application to a surface intended to receive it.

22. Coating medium according to Claim 20, whereby the hydrous solution contains a phosphate buffer medium at a concentration of from 0.01 mmol/liter to 0.1 mmol/liter.

23. Coating medium according to Claim 20 or 21, whereby the hydrous solution includes a fungicide.

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24. Coating medium according to according to one of Claims 12 to 22, whereby the hydrous solution, and as a result, the finished anti-solder coating (6), includes an anti-corrosion medium.

25. Coating medium according to one of Claims 12 to 23, whereby the hydrous solution has a pH value of between approximately 5.0 and approximately 7.0.

26. Coating medium according to one of Claims 12 to 24, whereby the hydrous solution, and as a result, the finished anti-solder coating (6), includes a light shielding medium and/or UV absorber, preferably at a concentration up to 1%.